OPERATIONAL TECHNICS FOR SHELTERED WORK PROGRAMS

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Article of the Month

Operational Technics for Sheltered Work Programs

A Guide for Planning and Management

N. P. Smith

About the Author . . .

Miss Smith is associated with the New York State Workmen's Compensation Board as a rehabilitation representative. During the years 1950-1953 she served as supervisor of the vocational project and as senior vocational counselor, Chicago Welfare Department. She received her M.A. degree from the University of Chicago in 1953 and studied rehabilitation counseling at New York University. In recent years she has been shop director, Baltimore League for Crippled Children and Adults; workshop coordinator of the Training Center and Workshop of the Association for the Help of Retarded Children, New York City; supervisor of the industrial homework department, which she established initially, of the Federation of the Handicapped, New York City; and director of vocational services, Burke Foundation, White Plains, N.Y. Miss Smith has several years' experience in vocational services and considerable background in industry and the trades.

This original article was written especially for Rehabilitation Literature.

Part Two of Two Parts

PART II

Production Considerations

A SHELTERED WORKSHOP'S responsibility for observing good business practices continues after the field representative has brought in the orders or contracts and while the work is in process. The real responsibility for a good business policy rests squarely on the shoulders of the production personnel. Floor supervisors should understand the responsibility and its importance. In sheltered workshops production supervisors are drawn from many walks of life. Although their backgrounds may vary, they tend to be persons whose major inclination is toward a service relationship with people. As a consequence, even those whose background includes business or industry may lose sight of business concepts through concentrating on the needs of their clients. From personal experience, I know how the enriched environment of a rehabilitation center will erase one's industrial values. It can take considerable time to regain these values and to recognize their significance for our main objective.

Production Control

A workshop's loss of its customers through failing to meet delivery dates with a stipulated quality and quantity of work is secondary to another loss incurred thereby—the opportunity to provide a better quality of service to its rehabilitation clients. Vocationally speaking, the best job training is given by an efficiently run shop that consistently emphasizes the importance of good business and industrial practices. Mrs. W. H. Parker[1] asks if the sheltered workshop is a business or a charity and answers that it is both: it cannot operate without subsidy, but

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without business it cannot exist. She also states that good business objectives can be attained by cutting down waste, keeping up production, and fulfilling contract specifications.

It is not uncommon for those of us in the production staff of sheltered workshops to feel we are serving two opposing masters. We are quite apt to see the industrial requirements of production as road blocks interfering with the needs of our clients. Such a viewpoint is not hard to understand, since work in a sheltered shop appeals exclusively to those primarily interested in people, who place high priority on human values. Is this viewpoint sound, however? It may be, if one thinks only in terms of the immediate situation. When one takes a long-range view of the goal and studies the road the client must travel to reach it, this viewpoint is quite unsound, particularly if the goal is a competitive job in industry.

In learning to achieve competence at anything, we must have standards for measuring our present level of performance and determining what more is needed. Each person must be able to apply these measurements to himself before real learning is achieved. In preparing a client for a place in industry, no scale can equal the job specifications for quality and productivity as required by our contracts. Once we accept this truth we will no longer be serving two masters; we will recognize quality specifications and production demands for the valuable tools they are, tools that function best when given proper attention and respect.

Most sheltered workshops do not operate at a loss only because they employ marginal workers. We often lose sight of the savings possible through efficient operation. This may be due to the absence of the profit motive, but conscientious shops are motivated to reduce losses. The agency's subsidy is a valuable resource that, if saved through efficient management, can be used to buy better services for clients. More efficient methods are the object of a never-ending search in industry, where the only gain is an increase in profit. The value of efficient operation for sheltered workshops cannot be measured by the decrease in losses alone; a much more important value is the constructive influence it has in developing more competent workers, whose employability will be improved thereby.

About This Article

Miss Smith's article has been published in two parts. Part II appears in this issue and Part I appeared in the August issue of *Rehabilitation Literature.* Part II is devoted primarily to 1) *Production Control,* 2) *Constructive Supervision,* 3) *Setting Up the Job,* and 4) *Meeting Contract Commitments.* In Part I Miss Smith discussed the preproduction considerations of *Contract Procurement* and *Organizing the Physical Plant.*

Miss Smith plans to incorporate the present two-part article in an operational manual on sheltered workshops and home employment programs that will be published soon as an instructional text for professional courses of study and as a guide for personnel engaged in this area of vocational rehabilitation.

When we wish to become more efficient, we cannot be general in our planning. Efficiency can result only from a careful study of specific aspects of our operations, as it is achieved by eliminating waste. We may waste time, or materials, or overhead. Waste of materials is usually obvious but waste in time or overhead is often not seen so easily. Wasting time is not defined as idleness alone; it is possible to be busy or to work hard while wasting time. Wasting overhead does not necessarily mean a too lavish use or abuse of supplies and equipment; it can mean an ineffective use of space and utilities or a poor selection of tools for the job.

Since efficient operation has long been carefully sought by industrialists, they have learned where to look for and how to go about eliminating waste. We can capitalize on their experience by studying some of their more important problem areas, such as:

1) Excessive materials handling due to:
   a) poorly organized storage
   b) poorly thought-out job processes
   c) inadequate equipment
2) Rework due to:
   a) poor training
   b) inadequate inspection
3) Job processes resulting in:
   a) waste motions
   b) extra materials handling
4) Tools, jigs, and fixtures requiring extra handling
5) Scheduling resulting in:
   a) waiting time
   b) unnecessary materials handling

Constructive Supervision

A primary consideration in the selection of production supervisors for sheltered workshops is personality. A warm, outgoing person who is interested in people and wishes to help them should be sought. Added to this may be requirements in professional training and industrial experience, or both. This is as it should be, because our major objective is service to people. It does not mean, however, that we can dispense with qualities that make for an effective industrial supervisor. What we are really seeking are the basic qualities of an adequate industrial supervisor plus a service personality. Admittedly, this is a tall order. It is, therefore, necessary to help our production personnel by thorough orientation and a continuation of inservice training.

First, it might be well to consider some special requirements for sheltered shop supervisors. Our person who wishes to help people needs to be empathetic rather than sympathetic. He must recognize the tough job facing his client and encourage him to make the needed effort without being soft enough to accept mediocre attempts. Pity has no place in the rehabilitation process; it is a debilitating emotion that denies the client the dignity due him. Pity is an indulgence the conscientious supervisor will avoid because it confuses values and can result only in a poorer service. The supervisor who is sorry for his clients will hesitate to hurt their feelings by correcting them. This results in an overprotective environment that leads to unrealistic expectations. The supervisor who is empathetic, on the other hand, will not hesitate to make realistic corrections and demands. His approach will not be blunt or unkind; he may say, "This looks good but the company won't accept it because . . ." or "This job is fair but it would be much better if you did it this way. . . ." This supervisor will recognize the importance of good workmanship for his client because he knows competence will help to offset his handicap.

Another special trait needed by our supervisor is the ability to see different ways to achieve the same work results. Ingenuity in developing methods of working and assistive devices for the by-passing of the client's handicap is a priceless quality in our production personnel.

The sheltered shop supervisor will need concepts and technics that do not apply to the foreman in industry. He will need to know how to deal with limitations in work tolerance and range of motion. He will need familiarity with the special terminologies and values of medicine, social work, guidance, and, in some cases, group work, because he will be a member of a team dominated by these professions.

The sheltered workshop's production supervisor also will need to use the skills of several industrial specialties, for he will be called on to pinch-hit for production engineering, plant layout, quality control, scheduling, and expediting personnel. In industry many of the smaller shops do not employ these specialists and a foreman in these shops must pinch-hit in the same way. In fact, given the preceding qualities, all that is now required of our supervisors is that they possess the skills of any good supervisor in a job shop!

A number of good books deal with the art and technics of supervision as applied to commerce and industry. They supply excellent tools for our purpose as well. Although no attempt will be made here to duplicate this work, this is a good time to mention C. A. Turner's *A Practical Manual of Effective Supervision.*[2] In his discussion of basic concepts, Turner lists 22 areas of supervisory responsibility, broken down under the headings: production, employee relations, and customer relations. All these responsibilities should apply to anyone supervising workers anywhere.

Before a supervisor can train his workers properly, he must have a clear picture of the operations to be taught. This is essential for determining the appropriate training method and sequence to use. Efficient production is largely dependent on adequate instruction. Therefore, the supervisor should plan specific job instruction carefully. Some basic principles of instruction are: 1) The instructor should encourage an attitude of patience and painstaking effort in the learner. 2) He should have the objectives of the lesson clearly in mind. 3) Each factor to be taught should be presented in a logical learning sequence, usually the sequence in which it occurs in the process although occasionally the easier steps can be taught first. 4) Quality specifications should be kept in mind at every step of the instruction to avoid developing substandard workmanship. 5) Efficient procedures should be stressed during instruction. Training is a tool for increasing production and improving quality.

Whether to emphasize speed or accuracy first in training is a moot question. When a fast or slow speed requires the same motions or when the chance of spoiling expensive materials is great, it might be advisable to start the new worker slowly and stress quality. Some operations, however, are quite different when done speedily or slowly; in such cases it is essential to teach the procedures at normal operating speeds. This is particularly true of some machine operations. For instance, in operating a power sewing machine on a long seam, the method of holding the fabric is somewhat different from that for sewing slowly or on short seams. When turning metals in a lathe the speed of operation will be dictated by the kind of metal being turned. The speed for turning brass differs from that for working steel or copper.

The production supervisor should consistently practice good teaching methods and seek ways of improving them. *Elements of Supervision*[3] recommends these methods: *First,* give an introductory description of the complete process, detailing hazards to be avoided, the value and nature of the equipment and product, and the use of special tools and gauges. Such an explanation will help the client learn the operation faster. *Second,* demonstrate once at normal production speed and then more slowly so the worker can see each step clearly. During this demonstration it is important that the worker's view of the operation be that he will have when doing the job himself. *Third,* let the client do the job himself as soon as he is familiar with all details. This initial attempt should be under the direct observation of the instructor. *Fourth,* correction by suggestion and demonstration should accompany initial trials as well as later work. *Fifth,* checking back on the client's work is essential both during early trials and as he progresses. This will prevent the formation of bad work habits.

If the foregoing training procedures are important for industrial supervisors, they are essential in a sheltered workshop, where one of the more important phases of training is directed toward instilling good work habits. We should never lose sight of the role of good work habits in the development of our clients. Superior workmanship can help even the score when a client moves into a nonsheltered environment, where he must compete with workers without his limitations.

Sometimes we hear the statement, "If the student hasn't learned, the teacher hasn't taught." Occasionally, when under pressure or when working with people whose learning capacity is retarded, we may consider this judgment unjust. If we pause for a moment to remember a very basic educational concept, it may relieve our feelings. The concept says that the teacher must always start working with the student *where he is*. In other words, all instruction must be reduced to terms and factors that will have the appropriate meaning for each student. With some immature clients, however, the major problem is not learning but retention. When this is the case, very close supervision and frequent reinstruction is unavoidably necessary.

The final objective of any rehabilitation shop is the eventual competitive employment of its graduates. With this in view, contract requirments of a specified quality and quantity of production within a given period of time assume a new importance—they can realistically measure the appropriate level at which clients can successfully be moved from the shop to private employment. The rehabilitation client's employment handicap usually extends beyond his capacity to do the job. He may need special equipment, facilities, or working hours or other considerations ordinarily not required. Therefore, a rehabilitation client whose skill and productivity have been developed to equal those of the *average* worker in the same area is not yet in a position to compete on a par. If his skill and productivity equal that of the *better* workers in his area, his bargaining position is improved. The rehabilitation workshop therefore should not settle for the level of performance that will merely satisfy its customers. It should aim for the level that will insure the success of its graduates.

This appears to be the approach used by Abilities, Inc., of Albertson, N.Y. While it does not seek to graduate its employees out of its plant, Abilities, Inc., really demonstrates the excellent capacities of its seriously handicapped workers. It operates without subsidy, shows a good profit, and continues to grow at a healthy rate. S. P. Small,[4] a satisfied customer, praises Abilities, Inc., for consistently going beyond the prime contractor's ground rules which he describes as "the threefold ability to manufacture a quality product, on time, at a competitive price."

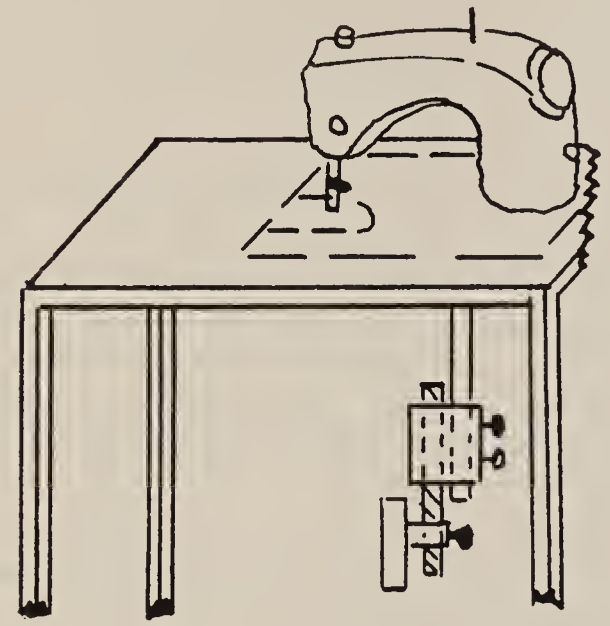
It is not unusual for the production supervisor in a shletered workshop to identify with his clients, becoming somewhat involved emotionally. Watching handicapped workers struggle with things that are relatively easy for the nonhandicapped does have a strong emotional appeal, and it is only natural for the supervisor to want to go easy rather than demand more and better production. Sometimes the need to apply production pressures to a handicapped work force makes one feel like Simon Legree. Being soft in this situation is as inadvisable as failing to pull a fractured limb straight before applying splints because the pull will be painful.

Any phase of rehabilitation is a tough job for the client. This is as true in the vocational phase as it is in physical medicine. The physical therapist who excuses his patient from exercise because it is difficult and painful may well be cheating him of realizing his full functioning potential. It is equally important for the work supervisor to use the pressures of production demands constructively, so he does not keep his client from his fullest work potential.

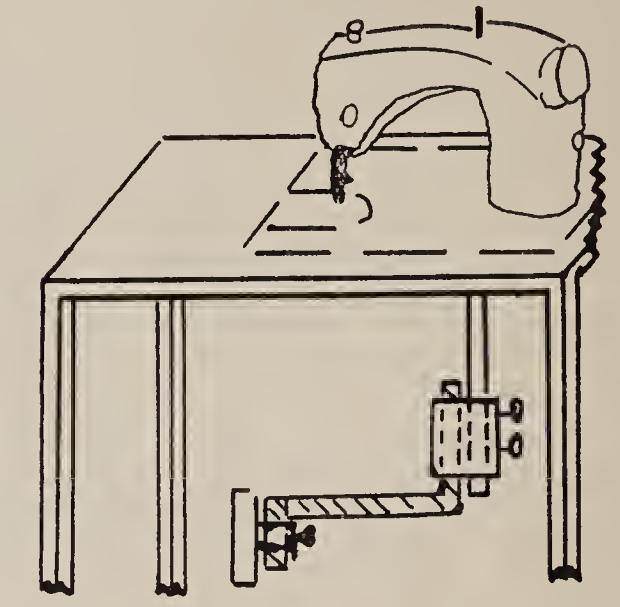
On occasion a supervisor may fear that correcting the worker or demanding more productivity will discourage and demoralize him. While it is true that some clients lack self-confidence and are so insecure that great care is required, the supervisor should not refrain from making the demands. Often the lack of self-confidence and a general insecurity are caused by the dependency engendered by hospital care or overprotective practices in the home. Before these clients can regain the self-confidence of independence, they must practice responding to gradually increasing demands for more and better work. Pressing for production with this type of client calls for considerable sensitivity on the part of the supervisor. Sometimes he should stress the progress already made before pointing out what more is needed. Sometimes he will want to set a series of easily attained immediate goals and thus lead the worker through a number of small steps to the desired level of performance.

We who work with the handicapped must never forget that, when we do not demand full participation and so fail to meet our contract commitments, the penalties we pay personally are but a fraction of the total cost. The major payment falls to our clients, who become less able workers with reduced earnings and employment opportunities. In the final analysis we do not rehabilitate the client. At best we can only help him do the job himself. When our demands are unrealistic we are hindering the client rather than being of help to him. The supervisor who is in industry also often finds that the imposing of production pressures and quality demands is a problem area.

Modern supervision is much concerned about a constructive atmosphere on the job. In speaking of the atmosphere of approval, Mason Haire[5] describes it as the freedom to make mistakes. He points out that this does not mean tolerating low standards of work. It implies the recognition of the honest mistake that comes from someone trying something and failing to accomplish it. He says that it is quite possible to correct mistakes with an atmosphere of approval and to maintain a high quality of work performance in this atmosphere, while it is equally possible to have an atmosphere of disapproval with rather low standards of work.



Standard knee press



Offset knee press for operation with left knee

Jigs and other assistive devices can often multiply an individual's productivity and earnings, but it is advisable not to become overenthusiastic and carry the provision of gadgets to unrealistic lengths. We must not further handicap our clients by building up a dependency on assistive devices that will prove awkward or expensive in the final industrial setting, even though they may be helpful in a sheltered or isolated environment. An example of this is training a one-handed person to type on an especially designed machine, although he is to be placed in the usual business office. A prospective employer would probably disapprove of this need for special equipment of no use to anyone else. A one-hand typewriter should certainly be used, however, if the person is to operate his own business or expects to type in his home only. An employer, however, would take a different view of an offset knee-press bar for a bar-tack operator who has lost function in his right leg. Such a bar can be attached by existing set screws that hold the usual straight bar on a standard machine. The operator can do the adaptation himself in a few minutes and it will not impose a hardship on another worker using the same machine.

When the production supervisor evaluates a job for terminal workers, any assistive device to improve productivity or ease of operation should be provided. For instance, a one-handed worker over age 65 might well use a holding fixture for the packaging of small items in a sleeve-covered box as illustrated on the next page.

A double fixture of the type illustrated, if it would increase the productivity of workers with two able hands, should be used with those clients who may be moving on into the packaging industry as well.

Indication for individual work adaptations rests on still another consideration. Assistive devices may be needed to help a young client in need of habilitation in surmounting psychological blocks created by his greater dependency and feelings of being different. They may help demonstrate that he does have a capacity for work. The slow learner or mentally retarded client can sometimes be assisted to grow beyond his present level through some work adaptation that can be discarded later. Many retardates, unable to count, can be helped to do a job slowly but accurately. When 10 or 15 items are to be packaged, the appropriate number of spaces may be ruled off on the bench top and the retarded worker instructed to place an item in each space and then pack the complete set. After working the job this way for a time, some gain the ability to count and package the items accurately in the usual manner. Helpful work adaptations that can be discarded later are always indicated, as is any other technic that will further the individual's progress.

Setting Up the Job

The production supervisor of a sheltered workshop works with a marginal labor force, and many of his workers have special needs to be given first consideration. Devising the most efficient production procedures possible is of prime importance. It is axiomatic that the less attention the supervisor must devote to the production process, once set up, the more freedom he has to concentrate on his clients. So, the more automatic controls he can build into his processes, the better.

Methods and Controls

In developing methods it might be well to start by finding the most efficient method for "normal" workers. Sometimes this has already been done by the customer, but improvement of methods is a continuing process and the best possible may not have been yet found. When the customer has not developed the operational procedure but has provided sufficient materials for a good trial run, the supervisor should do a preliminary study of the operation, writing it down, step by step, and trying to eliminate all unessential work and materials handling. Once the trial run is started it should be observed closely to eliminate waste motions or handling not screened out by the preliminary study. This is also the time to study the possibilities for inserting automatic controls such as quality checks or automatic counts.

In testing the process developed or suggested by the customer, the following principles of motion economy are helpful.

1) The two hands should begin as well as complete their movements at the same time.

2) Both hands should not be idle at the same time.

3) Arm motions should be made in opposite and symmetrical directions and should be simultaneous.

4) Hand motions should be reduced to the least possible amount in performing the work satisfactorily.

5) Use momentum to assist the worker whenever possible.

6) Smooth, continuous motions are preferable to zigzag or straight-line motions with sharp changes in direction.

7) Rhythm is essential to smooth, automatic performance; work should be arranged to permit easy natural rhythms whenever possible.

8) Tools and materials should be located to permit the best sequence of motions.

9) Hands should be relieved of all work that can be done more advantageously by jigs or fixtures or some foot-operated device.

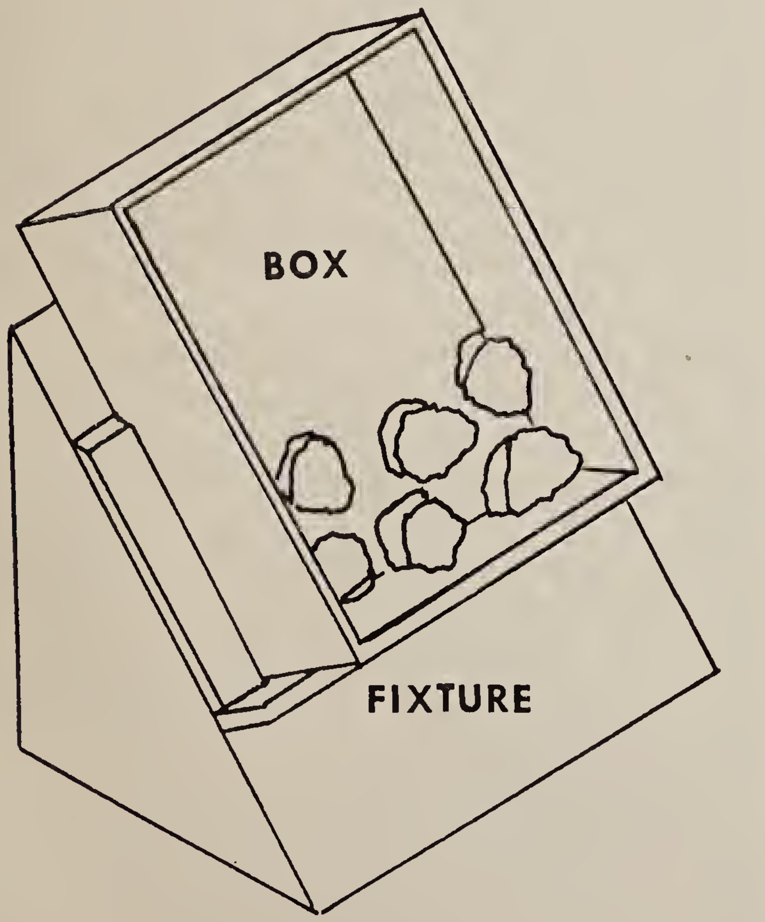
10) Two or more tools can sometimes be combined for more efficient use.

Another approach to work simplification is the testing of each step of each operation by using Kipling's helpers:

I keep six honest serving-men
    (They taught me all I knew);
Their names are What and Why and When
    And How and Where and Who.

Whatever method of analysis the production supervisor uses, all operations should be studied before and after they have been set up. To predict when or to whom an idea will occur that will multiply the productivity of any worker is impossible. For example, a large corporation had a job deburring balance wheels, and, although the initial method had been devised and used for some time in the burring department, a new worker on the job saw a possibility of making his work easier and safer, and, by changing the method, he multiplied his production by 10.

As originally set up, in the operation process the center hole of the wheel was fitted onto a tapered arbor while the lathe was at rest, the machine was started and one side of the wheel was polished with steel wool; the machine was then stopped and the piece removed and remounted so the other side could be polished. The machine was stopped again before the finished piece was removed. In an operation of this sort, there is a time lag between shutting off the power and the complete stopping of the spinning part. Since the balance wheel had a number of notches on its outer rim and, while spinning, had the effect of a saw, operators were frequently cut and lost time reporting for first aid. The daily quota on this operation was 400 pieces per operator. This process was changed so that the piece, held between two pads of steel wool, was placed on the arbor while it was in motion, both sides of the wheel were polished at the same time, and it was removed from the arbor without the machine's being stopped. The operators were no longer cut by touching moving parts they expected to be stationary, and the daily quota jumped to 4,000 pieces per operator.



The box extends above the back support of the fixture holding it in place while it is filled. The one-handed can slip the sleeve over the top part of the box before removing it from the fixture and closing it completely.

Developing job processes or setups for homework will add still other problems to those already solved for work to be done in the shop. The solutions for these problems will be highly individual, depending as they do on the physical facilities of each home and the capacities of each worker. Usually inprocess inspection will not be feasible and final inspection methods must be developed to cover all critical points. The training of homebound workers will need to be very thorough or spoilage may become a serious problem.

Once the supervisor has evolved a satisfactory operating process for the job, he should write up the job specifications, describing each operation in its proper sequence and including quality specifications, inspection methods and sequence, time study data, pay and billing rates, delivery schedule, and shipping instructions. For his convenience this information might be kept on job cards with the back of the card used for a running inventory of incoming materials, completed work, and outgoing shipments.

Before writing up inspection methods and sequence for the job card, the supervisor should review the operational process to determine where inspection will prevent spoilage or wasted labor on items already spoiled. Quality, so important in production, must never be left to chance. Methods of insuring it need to be determined, worked into the job process whenever possible, and written into the job specifications, so that adequate inspection becomes an automatic part of the production cycle. Whenever possible, quality specifications should be expressed in numbers, with acceptable tolerances specified. When this is not possible, samples of acceptable work should be kept available, with the margin of acceptability clearly indicated.

Selection of Workers

After a satisfactory method has been devised, it is essential to review the selection of workers. If a production line is to be used, the operation each individual will do must be chosen, deciding if he can perform it adequately so as not to cause a bottleneck to the flow of the line. If not, he might be aided to function more effectively by a change in procedure or use of a jig.

The industrial foreman, when selecting workers for specific jobs, normally chooses those with the aptitude, capacity, and skill to produce the most of an acceptable quality of work at the lowest cost. The workshop production supervisor has additional criteria, considerations of the individual client's vocational objectives and needs. Appropriate selection of workers for rehabilitation purposes cannot be governed solely by production needs and costs. More important controls are individual workers' needs. It is essential to assign the worker who needs to practice skills or gain productivity rather than to select one who will facilitate meeting the production deadline. While it is imperative to fulfill the production quota, the workshop's primary responsibility is to develop the handicapped individual's work potential. Additional workers may have to be assigned in order to get the work out.

Materials Flow

With new work set up properly, opportunity is afforded to predetermine materials flow, facilitating the storage of incoming materials for effective handling. Inefficient materials handling is a major source of waste in labor cost and one of the first areas studied when industrialists decide to cut costs.

A basic principle of efficient materials handling is the routing of materials so they are moved as little as possible, and in straight, consecutive steps to eliminate passage back and forth over the same ground. When payment of wages involves piecework rates or bonuses, the setup of the job and flow of materials should provide an automatic count for each operator's work whenever possible. When this automatic count is impossible on a production line, it sometimes helps to give the line raw materials in precounted lots or to remove completed work in job lots of a predetermined size. Whatever technics are used, it is essential to keep accurate track of each individual's output, or the advantages gained through the use of piecework pay are lost and no client's productivity can be accurately evaluated.

Shipments, as received, should be checked in to insure the receipt of specified quantities of correct items. When job specifications have been entered on a job card, the person receiving the shipment should store materials in accordance with the materials flow as indicated by the job process. All materials for each contract should be grouped together in the same storage area and the incoming materials itemized in the appropriate column on the back of the job card.

Except when inprocess quality controls are so rigid that defective work cannot possibly reach the shipping area, it is wise to make a final inspection as articles are packed. The thoroughness of this inspection will depend on the effectiveness of the inprocess inspection. Advantage should be taken of this last opportunity to insure an adequate quality of workmanship. As shipments are sent out, the data should be entered in the appropriate column on the back of the job card. When entries are made consistently, an approximate inventory can be done simply by checking the cards.

The shop doing some primary manufacturing will have buying problems, the severity of which will depend on the items produced. A shop that manufactures a line of items made up of a variety of parts will find that buying raw materials can become chaotic unless a workable procedure for buying has been established. When a wide variety of raw materials is used, it is imperative that a sample of each item be collected at some central place and each accompanied by information essential for reordering. A simple method for handling this problem with small parts is to mount items on sample boards with the name and address of the supplier, supplier's item number, price, and usual quantity ordered clearly noted. Including a notation of the items for which the part is used may help if manufacturing is done on an "on order" basis. This would facilitate the reordering of parts on receipt of orders and prevent material shortages when the work is in process.

Delivering raw materials and picking up completed work from the homebound call for some special considerations. Deliveries of raw materials should go out in balanced lots so there are enough of all items to work the shipment off completely. When packing for delivery it is important to check the location of the home. In large cities the homeworker may live on the top floor of a tall walk-up building. Inappropriately packed materials can impose undue hardships on the person making the delivery. A final inspection of incoming homework will be mandatory unless the person who makes the pickup inspects the work before removing it from the home. When this is feasible, repacking will be eliminated and labor saved.

Record-keeping

Precise and accurate records can determine the welfare of any institution. The production supervisor in a sheltered workshop needs accurate records to meet the federal and state legal requirements. Production and business records are necessary for operating efficiency and to satisfy his customers' requests for information. The volume of papers and paper work can become overwhelming and must be organized as efficiently as possible, especially for the shop floor.

The supervisor needs to have basic personal information on his clients at his finger tips. A card can provide concise data regarding medically prescribed physical and psychological limitations, work tolerance, therapy appointments, vocational objectives, and rehabilitation goals. Without such data at hand the supervisor may misassign clients when under pressure so they miss valuable practice opportunities. In some cases this misassignment can actually result in placing clients in work detrimental to their welfare.

Most records in a production department should be on file cards or in permanent record books. An exception is the individual daily production record or work slip giving the date, client's name, identification of work, quantity issued, time worked, and pay rate on each job done. At the end of the day the information on these slips can be entered in the daily production book, which will provide a permanent production record for the department. The slips can then be turned over to the bookkeeper for the compiling of the payroll. Later, if desired, these slips may be filed in the case folders of the workers.

The daily production book should be organized so that each job or contract has its own section showing the daily amount of production and time worked by individual clients as well as totals for each day. A summary page in each section can be used to enter weekly or monthly totals on units of production, time worked, and number of workers used. It will provide basic data for the efficient compiling of periodic reports, enable the supervisor to quickly give up-to-date information to the contractors, and be invaluable for the scheduling of production. The daily production book will provide production figures for the running inventory on the backs of job cards. It will also enable the supervisor to trace the productivity of a particular client over a period of time and on a variety of jobs. It can provide the field representative with valuable clues for making fast estimates regarding the shop's productivity and available manpower when bidding on new jobs.

It is highly important that shipping records be readily available in chronological order and in permanent form. Shipping tickets can be obtained in books providing detachable tickets duplicating nondetachable copies that remain in the book. Customer billing can be done directly from the permanent copies in such a book, eliminating the possibility of lost or misplaced shipping memos.

A receiving book is also essential for the workshop. This could be a loose-leaf binder organized to hold incoming shipping tickets in chronological order by contracts. When incoming shipments are consistently entered in a receiving book, the supervisor, by comparing these entries with those in the shipping book, can arrive at a quick inventory of all materials in the shop.

The shop doing primary manufacturing that requires a miscellany of raw materials needs records in book form of materials purchased. An adequate stock book can expedite the purchasing of needed parts if it has information on the location of suppliers of particular materials and if it provides the price, item number, and any special data needed for ordering.

Other personal records the shop supervisor will need to fill out or provide for reference from time to time include evaluative forms or check lists giving information on the client's work adjustment, productivity, and special problems. The reading of case histories will give the supervisor a better understanding of his clients. Record needs for different purposes will vary but all records should be readily available, concise, and easily interpreted.

Meeting Contract Commitments

The importance of meeting all contract commitments goes beyond the ethical question of a shop fulfilling an obligation. Failure in this respect not only can lose customers who may or may not be wanted but has more far-reaching results. Other sheltered shops in the area may find that a prospective customer is unwilling to deal with them because of an unhappy experience of this sort. An industrialist with no personal dealings with sheltered shops is sometimes unwilling to consider doing business because of a friend's experience with a poorly managed shop. This ill will in local industry can drastically reduce the employment opportunities of the graduates of sheltered shops. Satisfied customers are an important facet of the rehabilitation center's public relations, as they can influence the success of all vocational rehabilitation efforts in the community. Sheltered work organizations should give serious thought to helping their production staff to attain skill in handling customers.

We should remember that many of our clients have no recent working experience outside the shop and will need meaningful references in competing for a job. References from a shop without a good reputation industrially may hinder more than help. The industrial reputation of any shop is quite dependent on the quality of its workmanship and the consistency with which it meets its delivery dates.

Production Schedules

The meeting of contract commitments depends largely on the scheduling of production. The time study information on the job card, when evaluated in terms of the usual productivity of the workers assigned to do the job, will provide a sound basis for scheduling production. Worker productivity can be estimated by reviewing the daily production book. When scheduling a job to meet time commitments, it may be wise to include an additional time margin to offset emergencies when workers are absent or are removed from the job to help out on another under unexpected production pressure.

The production supervisor, when able to schedule all jobs sufficiently in advance, can prevent many of the rush periods and production emergencies that so often harass the production staff of sheltered workshops and job shops as well. Admittedly this is very difficult to do in a contract shop where the supervisor has limited control over the availability of raw materials. One approach to scheduling under this handicap is a plan to stockpile completed or partially completed work whenever possible and on as many contracts as possible. The limits imposed on stockpiling by lack of space for storage can sometimes be broadened by making deliveries ahead of schedule.

When planning the production schedule, each worker's program of other activities must be kept in mind and time for this added to the allowance for cushioning emergencies. It is always advisable to set definite production quotas for specified periods of time and to follow up to make sure these quotas are met.

The production supervisor also must co-ordinate his production plans with the rehabilitation plans for individuals and groups in other ways. The working experience is most helpful when it reinforces other corrective technics. When the shop is attached to a comprehensive rehabilitation center where functional occupational therapy and other therapies are provided, the person's work may be organized so as to serve as an extension of the therapy, sometimes providing prescribed exercise. If the supervisor intends to be as productive a team member as possible, he will keep informed of the current therapies of his clients and understand their functions.

If the shop has several departments or contracts are shared with other shops, the supervisor must help in co-ordination. Often others will be unfamiliar with his production methods. He needs to learn what the other shops produce within a given time before counting on their production in meeting his delivery dates. Some check on the quality of their work is essential in the beginning. It might be well in sending new work to other shops to do so on the basis of developing a stockpile, rather than to count on their production in meeting commitments. The same is true when work is sent to new homeworkers or to those who have never done a particular operation.

Controlling the production of a group of homeworkers presents many problems. The productivity of homeworkers trained in the shop will decrease when they start working at home and without the incentives provided by the group situation. It will therefore be necessary to develop their productivity to a level above that needed to earn their minimum hourly rates before terminating the training. Their craftsmanship should be developed to a point where minimum inspection can insure quality control, because when they work at home inprocess inspection will not usually be feasible.

Customer Relations

It is not unknown for customer demands on a shop to go beyond the original contract agreement. With the present trend toward rapidly changing work procedures, some demands may be legitimate, but others may not be justified. The person handling this kind of situation should have a detailed record of the agreement to help him deal with a potentially difficult problem.

When a customer requests a change in the process used for his work, it may mean a saving in labor costs and he may ask for an adjustment in price. If this happens, it is desirable to re-evaluate the work in line with the requested change. If the original pricing was done through an element time study, all that is necessary may be to deduct the labor charge for eliminated elements. On occasion a change in process may be an addition. If an element time study was done originally, timing of the new elements may be the only need. All such repricing should include a review of the total process, because the change may so alter the operating rhythm of the job as to cancel out or magnify the time lost or gained. In any case, when changing the price of a job, any retraining required should be allowed for.

When a customer's demands are not justified, it is important for the supervisor to retain his sense of humor and not let his natural reaction to unfair demands trick him into a defensive attitude leaving him at a disadvantage. Great tact is advisable in handling unfair demands. Standing on our rights may be an empty victory if the customer is antagonized. Usually a copy of the contract confirmation and an honest statement of the shop's position can serve to win the customer's co-operation and prevent future misunderstandings.

Although most of us like to think we always meet all of our commitments, the fact remains that on occasion a customer will have a legitimate complaint. It is a common human failing to try to justify our errors, when an honest admission of the error and an offer to correct it are usually more acceptable. Still a shop supervisor working under pressure is apt to feel defensive and try to justify his failings, especially when he is in the wrong. An example of this is the supervisor of mentally retarded workers who was overheard using his clients' handicap as a justification for failing to meet quality specifications. The damage such an excuse could do to the total agency program is inestimable. There may be occasions when an admission of error and an offer to make amends will not satisfy the customer, but no possible occasion can justify the use of our client's handicap as an excuse for not meeting specifications.

Sometimes an emergency may make it impossible for a shop to meet its delivery date on a particular contract. When this happens it is imperative that the customer be notified at once so he can take whatever action possible to protect his own delivery schedule. In preventing situations of this kind it may be helpful if the workshop has an agreement with other sheltered programs for using their work force through sharing contracts or by the use of workers in their own shop during the emergency. If some part of the contract is to be processed in another shop the customer should be told of the arrangement and his consent obtained. When neither of these methods can be used and the customer must be told that the shop cannot provide the production he is expecting, it may still be possible to recommend another shop the customer may use in overcoming his production shortage. This co-operative attitude will help reduce the customer's annoyance at not receiving the production when it was promised him.

Good customer relations can be equated with good human relations. The skills involved are complex. Luckily the production supervisor has usually developed considerable skill in human relations through dealing with his clients. The customer, like the client, is human and the technics that work well with one will often be as effective with the other. When we make friends of our customers, we will find them very helpful in many of our problem areas. Our responsibilities are such that we should certainly welcome all the help we can get from this source, especially since it will enable us to do a better job.

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Social Rehabilitation Of the Subnormal

by

Herbert C. Gunzburg

M.A., Ph.D. (Vienna), F.B.Ps.S.

Published in England by Baillière, Tindall & Cox, Ltd., 7 & 8 Henrietta St., London, and distributed in the United States by Williams & Wilkins Co., Baltimore 2, Md. 1960. 263 p. illus., figs., charts. $6.50.

Reviewed by Joseph J. Parnicky, M.S., Ph.D.

"IF ONLY SOMEONE WOULD WRITE a practical book; a book that discusses the everyday problems of those working directly with the retarded!" is an often expressed wish of institutional personnel and others in the field. Dr. Gunzburg's book is an answer to those seeking the *opus pragmaticus.*

For such readers the latter half of the book will be of prime interest, for it is here that the author deals with "schemes of work and therapeutics . . . [which] have actually been tried out in more than one hospital" *(p. xvi)* in programs designed for the subnormal late adolescents and young adults who show a potential for rehabilitation. In this section Dr. Gunzburg considers such topics as: "An Educational First-Aid Scheme"; "Pre-industrial Training in Institutions"; "Counselling the Delinquent and the Maladjusted"; "Discipline and Punishment"; "Relationship between the Sexes"; "Training for Leisure"; "Failure on Licence" (*i.e.,* on community placement). This sample of headings is evidence enough that the author is not fazed by difficult and controversial topics.

Dr. Gunzburg approaches rehabilitation of the subnormal individual as a psychologist with Viennese training and considerable experience, including a dozen years at Monyhull Hospital, Birmingham, England, where he is consultant psychologist. This hospital has been a center for much experimentation and re-evaluation of institutional programs for individuals who are subnormal.

Even though there are allusions to shillings and cricket clubs, the principles enunciated and issues raised in reference to programing for subnormal youth are certainly worth consideration by staffs everywhere. The author's governing philosophy is essentially pragmatic. He strongly advocates an integrated and graduated institutional program directed toward enabling the trainee academically, vocationally, and socially and one that utilizes the institution's capabilities on an around-the-clock basis.

About the Author . . .

Dr. Gunzburg, consultant psychologist and the director of psychological services, Monyhull Hospital, Birmingham, England, has been closely associated with the rehabilitation schemes described in the book under review, as he was the first education and training officer at Monyhull Hall Hospital, appointed in 1948. He has frequently contributed to the literature, writing on various aspects of mental defectives, their social adjustment, testing, and educational regimens.

About the Reviewer . . .

Since July, 1959, Dr. Parnicky has been superintendent of the Edward R. Johnstone Training and Research Center in Bordentown, N.J., a residential center for educable adolescents. A lecturer at Trenton State College and Rutgers University, he was formerly on the University's faculty. After training in sociology at Brown University (A.B., 1940), Dr. Parnicky did graduate work in psychiatric social work at Boston University (M.S., 1942). At New York University and Adelphi College (Ph.D., 1954), he studied clinical psychology. Dr. Parnicky worked in Army psychiatric clinics during World War II. He is the author of a number of publications, writing on rehabilitation, mental retardation, and institutional programs.

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